

REMARKS

The Applicant filed the subject continuation application under 37 CFR 1.153(b) on December 9, 2003, including the fee in accordance with 37 CFR 1.16. The present application was filed after allowance of the parent application, U.S. Patent App. No. 09/938,796, now U.S. Patent No. 6,717,291, allowed on November 25, 2003, and prior to the date of issue, April 6, 2004. Claims 14-31 stand pending. In the subject Office Action, the Examiner rejected Claims 14-31 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-36 of U.S. Pat. No. 6,717,291. Although the Applicant respectfully disagrees that the claims are not patentably distinct, in order to expedite issuance, Applicant hereby submits a Terminal Disclaimer without prejudice in compliance with 37 CFR 1.321(c) to overcome this objection.

Please note, in the previous version of claims submitted with the preliminary amendment submitted with the application, some of the claims had incorrect status identifiers. Attachment A has been provided to include the preliminary amendment claims filed with the present application showing the correct status identifiers at the time the Preliminary Amendment was filed, along with associated markings.

CONCLUSION

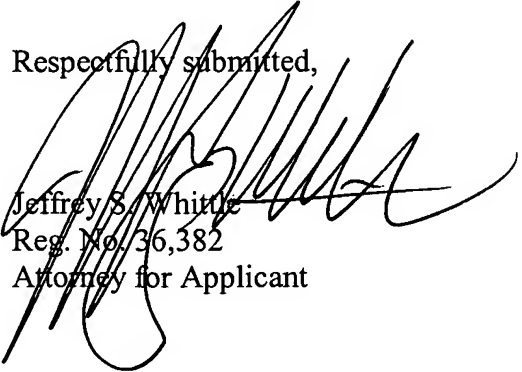
In view of the remarks set forth herein, Applicant respectfully submits that the application is in condition for allowance. Accordingly, the issuance of a Notice of Allowance in due course is respectfully requested.

Date:

9-29-05

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Respectfully submitted,


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ATTACHMENT A

PRELIMINARY AMENDMENT CLAIMS

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Currently amended) A user-actuated ignition system for starting an internal combustion engine in a vehicle, the system comprising:
 - a starter responsive to the user and having an electrically driven motor to crank the engine;
 - an alternator; and
 - an n-celled high-density capacitor electrically connected to the starter to provide power for driving the motor of the starter and thereby enabling the starter to crank the engine and connected to the alternator for receiving power from the alternator when the alternator is generating electrical current, the number of cells, n, corresponding to the amount of power delivered to the starter by the capacitor and the amount of power delivered from the alternator to the capacitor.
15. (Currently amended) A system as defined in Claim 14, wherein the (10 +i)th cell, $i \geq 1$, provides an incremental power increase of greater than about one and ninety six hundredths (1.96) times the product of the capacitance, C, of the capacitor and the total number of cells, n.

16. (Original) A system as defined in Claim 15, wherein power, p , is determined by the product 0.98 times the capacitance of the capacitor times the square of the number of cells employed in the system, according to the formula $p=0.98(C)(n^2)$ watts, where C is the capacitance of the capacitor and n is the number of cells.

17. (Currently amended) An internal combustion engine starting system comprising:
a starter to crank the engine when engaged;
an alternator mechanically connected to the engine to convert mechanical energy generated by the engine when the engine is operatively functioning into electrical energy;
a capacitor electrically connected to each of the starter and the alternator to provide power to the starter and receive power from the alternator, ~~and~~the capacitor having at least eleven cells which readily provides a voltage greater than 14.6 volts during normal operating conditions; and
a power delivery controller electrically connected to the capacitor and responsive the starter to prevent power from being delivered by the capacitor to the starter and permit power to be delivered to the capacitor from the alternator when the starter is disengaged and the alternator is operatively generating electrical current such that the energy level of the capacitor is maintained within a predetermined range while permitting power to be delivered to the starter when the starter is engaged.

18. (Original) A system as defined in Claim 17, wherein the capacitor provides at least fifteen volts (15.0V) under normal operating conditions to thereby generate more than six kilowatts of power (6kW) to the starter.

19. (Original) A system as defined in Claim 17, wherein the power delivery controller comprises a transistor responsive to an electrical signal supplied by the alternator when the alternator is generating electrical current, the transistor closing in response to the electrical system to permit power to be delivered to the capacitor from the alternator when the starter is disengaged and the alternator is operatively generating electrical current such that the energy level of the capacitor is maintained within a predetermined range.

20. (Original) A system as defined in Claim 19, wherein the power delivery controller comprises a magnetic switch responsive to an electrical signal supplied by the alternator when the alternator is generating electrical current, the magnetic switch closing in response to the electrical system to permit power to be delivered to the capacitor from the alternator when the starter is disengaged and the alternator is operatively generating electrical current such that the energy level of the capacitor is maintained within a predetermined range.

21. (Currently amended) A method for selectively providing power to an electrical system associated with an internal combustion engine connected to a starter, an alternator, and a battery, the method comprising:

supplying power from a capacitor to the starter when the engine is being started, the capacitor having at least eleven cells, defining an enhanced-power capacitor, to thereby readily provide a voltage greater than 14.6 volts during normal operating conditions;

preventing delivery of power from the enhanced-power capacitor to the electrical system when the engine is not being started; and

providing power from the alternator to the enhanced-power capacitor when the engine is running.

22. (Original) A method as defined in Claim 21, wherein the step of supplying power to the starter comprises generating more than six kilowatts of power (6kW) to the starter by providing a voltage with the enhanced-power capacitor of at least fifteen volts (15.0V) under normal operating conditions.

23. (Currently amended) A method as defined in Claim 21, wherein the ~~steps~~step of providing power from the alternator to the capacitor when the engine is running comprises providing a closed conductive path between the alternator and the capacitor, the path being established in response to a current generated by the alternator.

24. (Original) A method as defined in Claim 23, wherein the step of providing power from the alternator to the capacitor comprises providing a capacitor having a voltage level sufficient to deliver enough power to the starter to crank the engine and be recharged directly by the alternator.

25. (Original) A method as defined in Claim 24, wherein the step of providing power from the alternator to the capacitor comprises providing a capacitor having n cells wherein each cell provides an incremental increase in power of the product one and ninety six hundredths times the capacitance of the capacitor, C , and the number of cells, n , as represented by the expression $1.96(C)(n)$.

26. (Currently amended) A method as defined in Claim 23, wherein the step of providing power from the alternator to the capacitor further comprises stepping-up the voltage between the capacitor and the alternator such that the voltage is at least about fifteen volts (~~45~~15.0V) and less than about 17.8 volts (17.8V).

27. (Original) A method as defined in Claim 23, wherein the step of preventing delivery of power from the capacitor to the electrical system comprises electrically isolating the capacitor from the electrical system.

28. (Original) A method as defined in Claim 27, wherein the step of preventing delivery of power by isolating the enhanced-power capacitor comprises providing a transistor that is connected to the enhanced-power capacitor and that provides an open electrical connection when the engine is not running.

29. (Original) A method as defined in Claim 27, wherein the step of preventing delivery of power by isolating the enhanced-power capacitor comprises providing a magnetic switch that is connected to the enhanced-power capacitor and that provides an open electrical connection when the engine is not running.

30. (Original) A method as defined in Claim 21, further comprising selectively supplying power from the capacitor to the electrical system.

31. (Currently amended) A method as defined in ~~claim~~Claim 30, wherein the step of selectively supplying power from the capacitor to the electrical system is preformed by the user when the power available to the electrical system from the battery is insufficient to perform a function otherwise powered by the electrical system.